April 16, 2002

Mr. Ronald Dickerson
Nucor Steel
RR2, Box 31, County Road 300 East
Crawfordsville, IN 47933

Re: 107-15289
Minor Source Modification to:
Part 70 permit No.: T107-7172-00038

Dear Mr. Dickerson:

An application to modify Nucor Steel's pending operation permit T-107-7172-00038 for their strip caster line was received on January 23, 2002. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

Emission Unit and Control Equipment:

(1) Equipment for the application of oil to the rolling steel strip during the process at a rate of 1.2 lbs of oil per ton of rolling steel strip. The emissions will exhaust through the castrip rolling mill roof monitor identified as S-29.

(2) Three (3) natural gas-fired portable refractory drying burners rated at 0.635 MMBtu/hr each - 1.91 MMBtu/hr total. Emissions will exhaust through LMS roof monitor S-21.

(3) Two (2) natural gas-fired portable refractory drying burners rated at 1.742 MMBtu/hr each - 3.48 MMBtu/hr total. Emissions will exhaust through LMS roof monitor S-21.

(4) Thirty (30) natural gas-fired space heaters rated at 0.15 MMBtu/hr each - 4.5 MMBtu/hr total. Emissions will exhaust through LMS roof monitor S-21.

(5) One (1) nozzle core drilling operation with emissions exhausting through the LMS baghouse stack identified as S-20.

This modification also includes the following proposed change to condition A .2(c)(4) of Permit 197-14935-00038 ancillary equipment associated with the strip caster plant. The new wording will read as follows:

One (1) contact cooling tower system with four (4) cells and a maximum water flow rate of approximately 12,000 gallons per minute and one (1) noncontact cooling tower system with six (6**)** cells and a maximum water flow rate of approximately 12,000 gallons per minute. There are no emissions or emissions changes associated with this change.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).

2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

The source may begin construction and operation when the minor source modification has been issued. Operating conditions shall be incorporated into the Part 70 operating permit as a minor permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call (800) 451-6027, press 0 and ask for Walter Habeeb or dial (317) 232-8422.

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments
Minor Source Modification Permit and TSD
WVH
cc: File - Montgomery County
Air Compliance Section Inspector Jim Tjorpe
Compliance Data Section - Karen Nowak
Administrative and Development - Sara Cloe
Technical Support and Modeling - Michele Boner

PART 70 MINOR SOURCE MODIFICATION
OFFICE OF AIR QUALITY

Nucor Steel
RR 2, Box 311, County Road 400 East
Crawfordsville, Indiana 47933

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2 -7 as required by 42 U.S. C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Minor Source Modification No.: 107-15289-00038	
Issued by: Original Signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: April 16, 2002

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D.1 FACILITY OPERATION CONDITIONS - Additional Equipment associated with Strip Caster Line

SECTION A SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a steel mill.

Responsible Official:	Ronald Dickerson
Source Address:	RR 2, Box 311, County Road 400 East, Crawfordsville, IN 47933
Mailing Address:	RR 2, Box 311, County Road 400 East, Crawfordsville, IN 47933
Phone Number:	765-364-1323
SIC Code:	3312
County Location:	Montgomery
County Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source under PSD Major Source pursuant to Section 112 of the Clean Air Act One of 28 Listed Categories

A.2 Emission Units and Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission units and pollution control devices:

(1) Equipment for the application of oil to the rolling steel strip during the process at a rate of 1.2 lbs of oil per ton of rolling steel strip. The emissions will exhaust through the castrip rolling mill roof monitor identified as S-29.

(2) Three (3) natural gas-fired portable refractory drying burners rated at 0.635 MMBtu/hr each - 1.91 MMBtu/hr total. Emissions will exhaust through LMS roof monitor S-21.

(3) Two (2) natural gas-fired portable refractory drying burners rated at 1.742 MMBtu/hr each - 3.48 MMBtu/hr total. Emissions will exhaust through LMS roof monitor S-21.

(4) Thirty (30) natural gas-fired space heaters rated at 0.15 MMBtu/hr each - 4.5 MMBtu/hr total. Emissions will exhaust through LMS roof monitor S-21.

(5) One (1) nozzle core drilling operation with emissions exhausting through the LMS baghouse stack identified as S-20.

This modification also includes the following proposed change to condition A .2(c)(4) of Permit 197-14935-00038 ancillary equipment associated with the strip caster plant. The new wording will read as follows:

One (1) contact cooling tower system with four (4) cells and a maximum water flow rate of approximately 12,000 gallons per minute and one (1) noncontact cooling tower

system with six (6**)** cells and a maximum water flow rate of approximately 12,000 gallons per minute. There are no emissions or emissions changes associated with this change.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because it is a major source, as defined in 326 IAC 2-7-1(22).

SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 General Construction Conditions

(a) This approval is based on the data and information submitted by the Permittee. Any change in the design or operation of the plant that could increase emissions or change applicable air pollution control requirements may require that the approval be amended in accordance with 326 IAC 2 as set forth in condition B.5 of this approval.

(b) This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

(c) Notwithstanding Construction Condition B.5, all requirements and conditions of this approval shall remain in effect unless modified in a manner consistent with procedures established for modifications pursuant to 326 IAC 2 (Permit Review Rules).

(d) When the facility is constructed and placed into operation, the operation conditions required by Section C and Section D shall be met.

B.2 Definitions [326 IAC 2-7-1]

Terms in this approval shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-2-8]

Pursuant to 326 IAC 2-2-8(a)(1), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of eighteen (18) months or more.

B.5 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-7-16.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM,

OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the

Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value.

Any operation shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

SECTION C GENERAL OPERATION CONDITIONS

C.1 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

(a) Where specifically designated by this approval or required by an applicable requirement, any application form, report, or compliance certification submitted under this approval shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, on the attached Certification Form, with each submittal.

(c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) upon operation. The PMP shall include the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any emissions limitation.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to

the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this approval.

(b) Any application requesting an amendment or modification of this approval shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this approval:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.5 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute, rule, or in this approval, all air pollution control equipment listed in this approval and used to comply with an applicable requirement shall be operated at all times that an emission unit vented to a pollution control device is in operation.

C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using good engineering practices (GEP) pursuant to 326 IAC 1-7-3. The provisions of 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4(d)(3), (e), and (f), and 326 IAC 1-7-5(d) are not federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.7 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]

(a) Compliance testing on new emission units shall be conducted within 60 days after

achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this approval, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this approval, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.8 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

All monitoring and record keeping requirements shall be implemented upon startup. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

C.9 Maintenance of Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

(a) In the event that a breakdown of the emission monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less often than once an hour until such time as the continuous monitor is back in operation.

(b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.10 Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

(a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such

that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

(b) Whenever a condition in this permit requires the measurement of a fan amperage, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.11 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:

(1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.

(2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.

(b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:

(1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or

(2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

(3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.

(4) Failure to take reasonable response steps shall constitute a violation of the permit.

(c) The Permittee is not required to take any further response steps for any of the following reasons:

(1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.

(3) An automatic measurement was taken when the process was not operating.

(4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.

(d) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

(e) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.12 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C -7 Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.13 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

(a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement,

report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented upon startup.

C.14 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

(a) The reports required by conditions in Section D of this approval shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(b) Unless otherwise specified in this approval, any notice, report, or other submission required by this approval shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) Unless otherwise specified in this approval, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The reports do require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

(d) The first report shall cover the period commencing on the date of issuance of this approval and ending on the last day of the reporting period.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(a) Additional equipment associated with the existing strip caster line:

(1) Equipment for the application of oil to the rolling steel strip during the process at a rate of 1.2 lbs of oil per ton of rolling steel strip. The emissions will exhaust through the castrip rolling mill roof monitor identified as S-29.

(2) Three (3) natural gas-fired portable refractory drying burners rated at 0.635 MMBtu/hr each - 1.91 MMBtu/hr total. Emissions will exhaust through LMS roof monitor S-21.

(3) Two (2) natural gas-fired portable refractory drying burners rated at 1.742 MMBtu/hr each - 3.48 MMBtu/hr total. Emissions will exhaust through LMS roof monitor S-21.

(4) Thirty (30) natural gas-fired space heaters rated at 0.15 MMBtu/hr each - 4.5 MMBtu/hr total. Emissions will exhaust through LMS roof monitor S-21.

(5) One (1) nozzle core drilling operation with emissions exhausting through the LMS baghouse stack identified as S-20.

This modification also includes the following proposed change to condition A.2 (c)(4) of Permit 107-14935-00038 ancillary equipment associated with the strip caster plant. The new wording will read as follows:

One (1) contact cooling tower system with four (4) cells and a maximum water flow rate of approximately 12,000 gallons per minute and one (1) noncontact cooling tower system with six (6) cells and a maximum water flow rate of approximately 12,000 gallons per minute. There are no emissions or emissions changes associated with this change.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards

D.1.1 Particulate Matter (PM and PM_{10}) Emission Limitations

The exhaust stacks (S-20, S-21 and S-29) shall comply with the following requirement.

(a) The opacity from the exhaust stacks (S-20, S-21 and S-29) shall not exceed an average of forty percent (40%) in any one (1) six (6) minute period.

(b) Opacity shall not exceed sixty percent (60) for more than a cumulative total of fifteen (15) minutes (60) readings as measured according to 40 CFR Part 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period. This satisfies the opacity limitations required by 326 IAC 5-1 (Opacity Limitations).

D.1.2 Nitrogen Oxide (NOx) Emission Limitation

The above-mentioned combustion units shall comply with the following requirements:

(a) Each combustion facility shall utilize natural gas as the primary fuel and may utilize propane as a backup fuel; and

(b) The combustion facilities shall comply with the following:

Combustion Facility	No. Units	Max Heat Input Rate (MMBtu/hr)	Burner Type (or equivalent)	NOx Emission Limit (lb NOx/MMBtu)
Portable Refractory Drying Burners	3	0.635 each	Uncontrolled	0.18
Portable Refractory Drying Burners	2	1.742 each	Uncontrolled	0.18
Space Heater	30	0.15 each	Uncontrolled	0.10

D.1.3 Carbon Monoxide (CO) Emission Limitation

The CO emissions from these combustion units shall not exceed 0.084 lb/ MMBtu.

D.1.4 Volatile Organic Compounds (VOC) Emission Limitation

During the rolling process an emulsion of oil and water is applied to the steel strip to lubricate the strip and extend the life of the drive rollers. The oil and water mist generated will exhaust through S29 monitor. The VOC content of the oil is approximately 2.14%. VOC emissions from the process will be less than 25 tons per year. Therefore, BACT provisions pursuant to 326 IAC 8-1-6 (General provisions relating to VOC rules) shall not apply.

Compliance Determination and Monitoring

D.1.5 Performance Testing

Testing of the above-mentioned facilities is not required at this time. However, IDEM, OAQ retains the authority under 326 IAC 2-1-4(f) to require the Permittee to perform future compliance testing as necessary.

D.1.6 Visible Emissions Notations

Visible emissions notations of the LMS baghouse stack shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously “normal” means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

This monitoring condition is necessary to ensure compliance with 326 IAC 6-3 (Process Operations).

Recordkeeping and Reporting Requirements

D.1.7 Recordkeeping Requirement

There are no record keeping or reporting requirements necessary for this Minor Source Modification.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70
Minor Source Modification

Source Background and Description

Source Name:	Nucor Steel
Source Location:	Box 311, Crawfordsville, Indiana 47933
County:	Montgomery
SIC Code:	3312
Operation Permit No.:	T 107-7172-00038
Operation Permit Issuance Date:	Not Yet Issued
Minor Source Modification No.:	107-15289-00038
Permit Reviewer:	Walter Habeeb

The Office of Air Quality (OAQ) has reviewed a modification application from Nucor Steel relating to the construction of the following additional emission units and pollution control devices for the existing permitted strip caster line.

(1) Equipment for the application of oil to the rolling steel strip during the process at a rate of 1.2 lbs of oil per ton of rolling steel strip. The emissions will exhaust through the castrip rolling mill roof monitor identified as S-29.

(2) Three (3) natural gas-fired portable refractory drying burners rated at 0.635 MMBtu/hr each - 1.91 MMBtu/hr total. Emissions will exhaust through LMS roof monitor S-21.

(3) Two (2) natural gas-fired portable refractory drying burners rated at 1.742 MMBtu/hr each - 3.48 MMBtu/hr total. Emissions will exhaust through LMS roof monitor S-21.

(4) Thirty (30) natural gas-fired space heaters rated at 0.15 MMBtu/hr each - 4.5 MMBtu/hr total. Emissions will exhaust through LMS roof monitor S-21.

(5) One (1) nozzle core drilling operation with emissions exhausting through the LMS baghouse stack identified as S-20.

This modification also includes the following proposed change to ancillary equipment associated with the strip caster plant. The wording with a strikeout has been deleted and the bold has been added.

One (1) contact cooling tower system with ~~six(6)~~ **four (4**) cells and a maximum water flow rate of approximately 12,000 gallons per minute and one (1) noncontact cooling tower system with ~~four (4)~~ **six (6)** cells and a maximum water flow rate of approximately 12,000

gallons per minute. There are no emissions or emissions changes associated with this change.

History

The following review provides a short summary of the permitting history for the existing electric arc furnaces (EAFs) at Nucor Steel:

(a) PC (54) 1742, Issued on April 28, 1989 - This PSD permit was to construct a steel mill designed to process approximately 1,400,000 tons per year of hot and cold rolled steel strip in coil form. The project consisted of two electric arc furnaces (EAFs) equipped with direct shell evacuation systems and a canopy hood having 100 percent capture efficiency.

(b) CP107-2764-00038, Issued on November 30, 1993 - This PSD modification was performed to increase the steel production rate from 160 tons per hour to 260 tons per hour. A second continuous caster was installed to handle the increase in steel production.

(c) CP107-5235-00038, Issued on June 20, 1996 - This PSD modification was performed to increase the steel production rate from 260 tons per hour to 502 tons per hour. Additional burners were added to the existing equipment to handle the increase in steel production.

(d) CP107-12143-00038, Issued on January 19, 2001 - This PSD Significant Source Modification consist of the addition of one (1) new strip caster line that has a maximum rate of 135 tons per hour. Also included was the addition of one bead blasting system, one melt shop ladle preheated and 18 batch annealing furnaces that were originally part of permit application (107-11691-00038).

(e) CP107-14935-00038, Issued on September 11, 2001 - This Administrative Amendment included changing the total MMBtu/hr for all the natural gas combustion equipment used for the strip caster plant from 107 MMbtu/hr to 81 MMBtu/hr, adding the location of the contact cooling tower and inclusion of the number of cells four (4) and adding the location of the non-contact cooling tower and inclusion of the number of cells six (6).

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height	Diameter	Flow Rate	Temperature
S-20	LMS Baghouse	100	8.5	230,328	150
S-21	LMS Roof	104	-	-	-
S-29	Rolling Roof Monitor	-	-	-	-

Recommendation

The staff recommends to the Commissioner that the Part 70 Minor Source Modification be

approved. This recommendation is based on information derived from the application submitted by the applicant on December 13, 2001.

Emission Calculations

The emission calculations for the criteria pollutants and hazardous air pollutants (HAPs) are provided in Appendix A. (pages 1 through 7).

Unrestricted Potential Emissions of the Modification

This table reflects the unrestricted potential emissions of the modifications to the strip caster plant, excluding the emission limits that were contained in the proposed TV 107-7172-00038.

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	0.0
PM-10	0.3
SO_2	0.0
VOC	13.1
CO	3.7
NO_x	6.3

HAP's	Potential To Emit (tons/year)
Hexane	0.078
TOTAL	0.078

(a) Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are counted toward determination of PSD and Emission Offset applicability.

(b) This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40CFR 52.21, the PSD requirements do not apply.

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Minor Source Modification. This modification is being performed pursuant to 2-7-10.5(b)(2) because some of the emissions increases are greater then 10 tons per year and none are greater than 25 tons per year.

County Attainment Status

The source is located in Montgomery County.

Pollutant	Status

PM-10	Attainment
SO_2	Attainment
NO_2	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Montgomery County has been designated as attainment or unclassifiable for ozone. Therefore, VOC were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Montgomery County has been classified as attainment or unclassifiable for all criteria pollutant. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	259.3
PM-10	247.6
SO_2	798.6
VOC	335.2
CO	4647.1
NOx	1538.2
Lead	0.7

This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the 28 listed source categories.

Potential to Emit of Modification After Issuance

(a) The table below summarizes the potential to emit (PTE) of the modifications to the strip caster line of each criteria pollutant, reflecting all limits of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

Pollutant	PTE (tons/year)	PSD Significance Levels
PM	0.0	25
PM-10	0.3	15
SO_2	0.0	40
VOC	13.1	40
CO	3.7	100
NOx	6.3	40
Pb	0.20	0.6

This modification to an existing major stationary source is minor for PSD because the emissions of all of the criteria pollutant is less than the PSD significant threshold level. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

(b) The table below summarizes the potential to emit from the modifications to the strip caster line of each hazardous air pollutant (HAP), reflecting all limits of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

HAP Pollutant	PTE (tons/yr)
Benzene	0.00
Formaldehyde	0.06
Naphthalene	0.00
Toluene	0.00
Hexane	1.37
Xylene	0.00
Propylene	0.00
1,3 Butadiene	0.00
Acetaldehyde	0.00
Acrolein	0.00
Lead Compounds	0.014
Total HAPs	1.44

This modification is not a major source of HAP emissions because the potential to emit of each HAP is less than the significant threshold level for a single HAP (10 tons per year) and the potential to emit of the total HAPs are less than the significant threshold level for combined HAPs (25 tons per year). Therefore, pursuant to 326 IAC 2-1-3.4, the New Source Toxic Control requirements do not apply.

Federal and State Rule Applicability

326 IAC 12 (New Source Performance Standards

There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

326 IAC 14 (NESHAPs)

There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR art 63) applicable to this proposed modification.

The equipment associated with the proposed modification is not subject to an applicable NESHAP and because the worst case emissions from a single HAP and combined HAPs are less than the major source threshold levels, MACT pursuant to 326 IAC 2-1-3.4 does not apply.

326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 8-1-6 (General Provisions Relating to VOC Rules)
The volatile organic compound (VOC) content of the oil delivered from the oiling equipment for the rolling steel strip associated with the proposed modification is not subject to 326 IAC 8-1-6 because the emissions from the process are less than the threshold levels.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

(a) The exhaust stack S-20 have applicable compliance monitoring conditions as specified below:

(1) Visible emissions notations of LMS baghouse stack shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

This monitoring condition is necessary to ensure compliance with 326 IAC 6-3 (Process Operations).

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification No. 107-15289-00038.